



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/830,068	04/23/2004	Young Joon Ahn	YHK-0135	7680

34610 7590 01/25/2007  
FLESHNER & KIM, LLP  
P.O. BOX 221200  
CHANTILLY, VA 20153

EXAMINER
----------

DONG, DALEI

ART UNIT	PAPER NUMBER
----------	--------------

2879

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/25/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

**Application No.**

10/830,068

**Applicant(s)**

AHN, YOUNG JOON

**Examiner**

Dalei Dong

**Art Unit**

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3,5,7-9,11-13,26-37 and 39-42 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,3,5,7-9,11-13,32-37,40 and 42 is/are allowed.
- 6) ☒ Claim(s) 26,30 and 41 is/are rejected.
- 7) ☒ Claim(s) 27-29,31 and 39 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

**DETAILED ACTION**

***Allowable Subject Matter***

1. Applicant is advised that the Notice of Allowance mailed October 19, 2006 is vacated. If the issue fee has already been paid, applicant may request a refund or request that the fee be credited to a deposit account. However, applicant may wait until the application is either found allowable or held abandoned. If allowed, upon receipt of a new Notice of Allowance, applicant may request that the previously submitted issue fee be applied. If abandoned, applicant may request refund or credit to a specified Deposit Account.
2. The indicated allowability of claims 26-31, 39 and 41 are withdrawn in view of the newly discovered reference(s) to U.S. PGPUB 2005/0029938 to Kwon. Rejections based on the newly cited reference(s) follow.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 26, 30 and 41 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. PGPUB 2005/0029938 to Kwon.

Regarding to claim 26, Kwon discloses in Figure 1, a plasma display panel, comprising: a first substrate (11); a second substrate (21) arranged with respect to the first substrate (11) such that a discharge space is provided therebetween; a sealing layer (16) between the first substrate (11) and the second substrate (21); and at least one of a buffer layer or a dielectric layer (14, upper dielectrics) formed between the first substrate (11) and the sealing layer (16), wherein the at least one of the bugger layer or the dielectric layer (14, upper dielectrics) has a thermal expansion coefficient of approximately  $72 \times 10^{-7}/^{\circ}\text{C}$  to  $85 \times 10^{-7}/^{\circ}\text{C}$ .

Regarding to claim 30, Kwon discloses in Figure 1, the first substrate (11) is composed of a soda-lime silicate (see paragraph 11) and the buffer layer (upper dielectric 14) composed of embodiments show in Figure 2, thus, the first substrate and the buffer layer are composed of different material and the Examiner interprets that the different material composition therefore has different thermal expansion coefficient.

Regarding to claim 41, Kwon discloses in Figure 1, electrodes (22, 12, 13) formed on the first (11) and second substrates (21).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the

Art Unit: 2879

reference was derived from the inventor of this application and is thus not the invention “by another,” or by an appropriate showing under 37 CFR 1.131.

***Allowable Subject Matter***

5. Claims 1, 3, 5, 7-9, 11-13, 32-34, 36, 37, 40 and 42 allowed.

6. The following is an examiner’s statement of reasons for allowance:

Regarding to independent claim 1, prior art of record taken alone or in combination fails to teach or suggest a plasma display panel comprising: at least one of a buffer layer or a dielectric layer formed between the first substrate and the sealing layer, wherein the at least one of the buffer layer or the dielectric layer has the following composition: PbO at a ratio of 45% to 55%, B<sub>2</sub>O<sub>3</sub> at a ratio of 10% to 20% and a SiO<sub>2</sub> at a ratio of 15% to 25% in combination with other claimed features of the present claimed invention.

Regarding to dependent claims 3, 5, 7-9, 11-13, 33 and 40, are allowable because of the dependency upon the allowable independent claim 1.

Regarding to independent claim 32, prior art of record taken alone or in combination fails to teach or suggest a plasma display panel comprising: at least one of a buffer layer or a dielectric layer formed between the first substrate and the sealing layer, wherein at least one of the buffer layer or the dielectric layer has a thermal expansion

Art Unit: 2879

coefficient of approximately  $72 \times 10^{-7}/^{\circ}\text{C}$  to  $85 \times 10^{-7}/^{\circ}\text{C}$ , wherein the buffer layer has a thickness of 35  $\mu\text{m}$  to 50  $\mu\text{m}$  between the sealing layer and the first substrate in combination with other claimed features of the present claimed invention.

Regarding to dependent claims 34, 36, 37 and 42, are allowable because of the dependency upon the allowable independent claim 32.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

7. Claims 27-29, 31 and 39 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding to claim 27, prior art of record taken alone or in combination taken alone or in combination fails to teach or suggest a plasma display panel comprising a sealing layer extends in a longitudinal direction from a first end to a second end, the first end located proximal to the first substrate and the second end located proximal to the

second substrate, the bugger layer provided only in the area between the first end of the sealing layer and the first substrate.

Regarding to claim 28, prior art of record taken alone or in combination fails to teach or suggest a plasma display panel comprising: another sealing layer between the first substrate and the second substrate; and another buffer layer formed between the first substrate and the another sealing layer such that the another buffer layer is provided only in another area between the first substrate and the another sealing layer, the another buffer layer to compensate thermal stress of the first substrate and the another sealing layer.

Regarding to claim 29, is allowed because of the dependency upon the allowable dependent claim 28.

Regarding to claim 31, prior art of record taken alone or in combination fails to teach or suggest a plasma display panel comprising the thermal expansion coefficient of the buffer layer is different from a thermal expansion coefficient of the sealing layer.

Regarding to claim 39, prior art of record taken alone or in combination fails to teach or suggest a plasma display panel comprising: at least one of the buffer layer or the dielectric layer has the following composition: PbO at a ratio of 45% to 55%, B<sub>2</sub>O<sub>3</sub> at a ratio of 10% to 20% and a SiO<sub>2</sub> at a ratio of 15% to 25%.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dalei Dong whose telephone number is (571)272-2370. The examiner can normally be reached on 8 A.M. to 5 P.M..

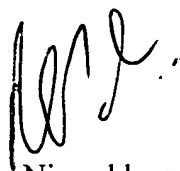
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar Patel can be reached on (571)272-2457. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



D.D.

December 8, 2006



Nimeshkumar D. Patel  
Supervisory Patent Examiner  
Art Unit 2879